

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A packet data serving node for connecting a communication terminal device to a public network by using Point to Point Protocol (PPP), comprising:

LCPLink Control Protocol (LCP) phase processing means;

NCPNetwork Control Protocol (NCP) phase processing means;

decision means for deciding a layer 3 protocol type of a reception PPP packet; and

control means for making said NCP phase processing means transmit an NCP start request message destined to said communication terminal device, after an LCP phase is completed and said decision means receives an NCP start request message from said communication terminal device.

2. (Currently Amended) A packet data serving node for connecting a communication terminal device to a public network by using Point to Point Protocol (PPP), comprising:

LCPLink Control Protocol (LCP) phase processing means;

a plurality of NCPNetwork Control Protocol (NCP) phase processing means;

decision means for deciding a layer 3 protocol type of a reception PPP packet; and

control means for selecting one of said NCP phase processing means corresponding to a layer 3 protocol used by said communication terminal device and making said selected NCP phase processing means transmit an NCP start request message destined to said communication terminal device, after an LCP phase is completed and said decision means receives an NCP start request message from said communication terminal device.

3. (Currently Amended) A packet data serving node for connecting a communication terminal device to a public network by using Point to Point Protocol (PPP), comprising:

~~LCP~~Link Control Protocol (LCP) phase processing means;
~~NCP~~Network Control Protocol (NCP) phase processing means;
decision means for deciding a layer 3 protocol type of a reception PPP packet; and

control means for setting a layer 3 protocol used by said communication terminal device to said NCP phase processing means and making said NCP phase processing means transmit an NCP start request message destined to said communication terminal device, after an LCP phase is completed and said decision means receives an NCP start request message from said communication terminal device.

4. (Currently Amended) A packet data serving node for connecting a communication terminal device to a public network by using Point to Point Protocol (PPP), comprising:

~~LCP~~Link Control Protocol (LCP) phase processing means;

~~NCP~~Network Control Protocol (NCP) phase processing means;

decision means for deciding a layer 3 protocol type of a reception PPP packet;

statistics processing means for statistically processing a type of a layer 3 protocol under PPP; and

control means for selecting said NCP phase processing means using a layer 3 protocol designated by said statistics processing means, and after an LCP phase is completed, making said NCP phase processing means transmit an NCP start request message destined to said communication terminal device.

5. (Currently Amended) A communication method for a communication system using Point to Point Protocol (PPP) wherein:

after an ~~LCP~~Link Control Protocol (LCP) phase process is completed between a terminal device and a packet data serving node,

said terminal device starts an ~~NCP~~Network Control Protocol (NCP) phase process and transmits an NCP start request message to said packet data serving node; and

said packet data serving node starts an NCP phase process after the NCP start request message is received from said terminal, and transmits an NCP start request message to said terminal by using a layer 3 protocol notified from said terminal.

6. (New) A communication connection apparatus for connecting a communication terminal to a public network by using Point to Point Protocol (PPP) via a provider network, comprising:

a receiver unit which receives a Network Control Protocol (NCP) start request packet from the communication terminal after completing a Link Control Protocol (LCP) process and an authentication process; and

a control unit which decides a NCP layer 3 protocol type of a received packet based on layer 3 protocol type identification information in a field of the NCP start request packet received by the receiver unit, and which transmits a NCP start request packet of the decided protocol type to the communication terminal.

7. (New) A communication connection apparatus for connecting a communication terminal to a public network by using Point to Point Protocol (PPP) via a provider network, comprising:

a transmitter unit which transmits a plurality of Network Control Protocol (NCP) start request packets corresponding to a plurality of protocols respectively to the communication terminal after completing a Link Control Protocol (LCP) process and an authentication process;

a receiver unit which receives a NCP start request packet corresponding to one of the plurality of protocols from the communication terminal; and

a control unit which controls to decide a protocol type used by a source communication terminal of the received NCP start request packet based on information in the NCP start request packet received by the receiver unit, and which

transmits a connection permission packet of the decided protocol type to the source communication terminal.

8. (New) A communication connection apparatus for connecting a communication terminal to a public network by using Point to Point Protocol (PPP) via a provider network, comprising:

- a transmitter unit which transmits a Network Control Protocol (NCP) start request packet of a layer 3 protocol type used by the communication terminal to the communication terminal after completing a Link Control Protocol (LCP) process and an authentication process;

- a receiver unit which receives a NCP start request packet of the protocol from the communication terminal; and

- a control unit which controls to transmit a connection permission packet of the protocol to a source communication terminal of the NCP start request packet.

9. (New) A communication terminal connected to a public network via a provider network and a communication connection apparatus by using Point to Point Protocol (PPP), comprising:

- a receiver unit which receives a Network Control Protocol (NCP) start request packet from the communication connection apparatus after completing a Link Control Protocol (LCP) process and an authentication process;

- a control unit which controls to decide a layer 3 protocol type of the received packet based on layer 3 protocol type identification information in a field in the NCP start request packet received by the receiver unit, and which transmits a NCP start

request packet of the decided protocol type to the communication connection apparatus when the decided protocol type coincides with a protocol used by the communication terminal.

10. (New) A communication terminal according to claim 9, wherein the control unit discards the Network Control Protocol (NCP) start request packet received by the receiver unit when the protocol type decided based on layer 3 protocol type identification information in the field in the NCP start request packet received by the receiver unit does not coincide with a protocol used by the communication terminal.

11. (New) The packet data serving node according to claim 1, wherein said reception PPP packet is from said communication terminal device.

12. (New) The packet data serving node according to claim 1, wherein said NCP start request message, destined to said communication terminal device, having a protocol type corresponding to the layer 3 protocol type decided by the decision means.

13. (New) The packet data serving node according to claim 2, wherein said reception PPP packet is from said communication terminal device.

14. (New) The packet data serving node according to claim 2, wherein said NCP start request message, destined to said communication terminal device, having a protocol type corresponding to the layer 3 protocol type decided by the decision means.

15. (New) The packet data serving node according to claim 3, wherein said reception PPP packet is from said communication terminal device.

16. (New) The packet data serving node according to claim 3, wherein said NCP start request message, destined to said communication terminal device, having a protocol type corresponding to the layer 3 protocol type decided by the decision means.

17. (New) The packet data serving node according to claim 4, wherein said reception PPP packet is from said communication terminal device.

18. (New) The communication connection apparatus according to claim 6, wherein said received packet is from said communication terminal.

19. (New) The communication connection apparatus according to claim 6, wherein the transmitted said NCP start request packet has a protocol type corresponding to the layer 3 protocol type of the received packet.

20. (New) The communication connection apparatus according to claim 7, wherein the transmitted said connection permission packet has a protocol type corresponding to the protocol type of the received NCP start request packet.

21. (New) The communication connection apparatus according to claim 8, wherein the transmitted said connection permission packet has a protocol type corresponding to the protocol type of the received NCP start request packet.

22. (New) The communication terminal according to claim 9, wherein the transmitted said connection permission packet has a protocol type corresponding to the protocol type of the received NCP start request packet.